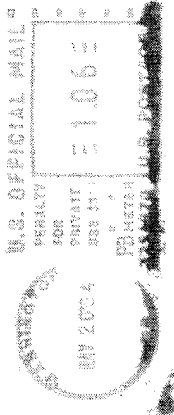
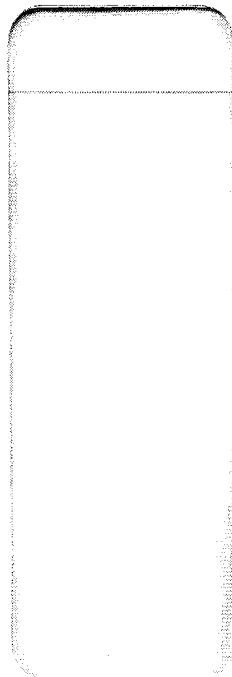


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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/642,272	08/18/2003	1653	1386	58777.000012	23	32	8

**CONFIRMATION NO. 3248**

HUNTON & WILLIAMS LLP  
Suite 1200  
1900 K Street, N.W.  
Washington, DC 20006-1109

## FILING RECEIPT



\*OC000000012729848\*

Date Mailed: 05/20/2004

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### Applicant(s)

Fumiyuki Hattori, Osaka, JAPAN;  
Keijiro Sugimura, Osaka, JAPAN;  
Mayumi Furuya, Osaka, JAPAN;

### Assignment For Published Patent Application

DAIICHI SUNTORY PHARMA CO., LTD., Tokyo, JAPAN;  
DAIICHI SUNTORY BIOMEDICAL RESEARCH, LTD., Osaka, JAPAN;

### Domestic Priority data as claimed by applicant

This application is a CON of PCT/JP02/01358 02/18/2001

### Foreign Applications

JAPAN 41003/2001 02/16/2001

**If Required, Foreign Filing License Granted: 05/20/2004**

**Projected Publication Date:** To Be Determined - pending completion of Sequence Disclosures

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

Therapeutic methods and agents for diseases associated with decreased expression of AOP-1 gene or AOP-1

**Preliminary Class**

435

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/642,272	08/18/2003	Fumiyuki Hattori	58777.000012

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 Washington, DC 20006-1109

CONFIRMATION NO. 3248

## FORMALITIES LETTER



\*OC000000012729849\*

Date Mailed: 05/20/2004

# NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

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Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

**For questions regarding compliance to these requirements, please contact:**

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/642,272	08/18/2003	Fumiyuki Hattori	58777.000012

CONFIRMATION NO. 3248

HUNTON & WILLIAMS LLP  
 Suite 1200  
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\*OC000000012729849\*

Date Mailed: 05/20/2004

# NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

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## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 101642,272  
Source: oipe  
Date Processed by STIC: 8-28-03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

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Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

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Revised 04/24/2003



# Raw Sequence Listing Error Summary

## ERROR DETECTED

## SUGGESTED CORRECTION

SERIAL NUMBER:

10/642,272

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1        Wrapped Nucleics  
    Wrapped Aminos      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2        Invalid Line Length      The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3        Misaligned Amino  
    Numbering      The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4        Non-ASCII      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5        Variable Length      Sequence(s)        contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6        PatentIn 2.0  
    "bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s)       . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7        Skipped Sequences  
    (OLD RULES)      Sequence(s)        missing. If intentional, please insert the following lines for each skipped sequence:  
    (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
    (i)        SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
    (ii) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
    This sequence is intentionally skipped  
  
    Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 X        Skipped Sequences  
    (NEW RULES)      Sequence(s) 6 missing. If intentional, please insert the following lines for each skipped sequence.  
    <210> sequence id number  
    <400> sequence id number  
    000
- 9        Use of n's or Xaa's  
    (NEW RULES)      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
    Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
    In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.
- 10        Invalid <213>  
    Response      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11        Use of <220>      Sequence(s)        missing the <220> "Feature" and associated numeric identifiers and responses.  
    Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
    (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12        PatentIn 2.0  
    "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13        Misuse of n      n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.



OIPF

## RAW SEQUENCE LISTING

DATE: 08/28/2003

PATENT APPLICATION: US/10/642,272

TIME: 10:52:52

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt

Output Set: N:\CRF4\08282003\J642272.raw

3 <110> APPLICANT: Brandt, Kevin S.  
 4 Gaines, Patrick J.  
 5 Stinchcomb, Dan T.  
 6 Wisniewski, Nancy  
 8 <120> TITLE OF INVENTION: FLEA HEAD, NERVE CORD, HINDGUT AND MALPIGHIAN TUBULE NUCLEIC  
 ACID  
 9 MOLECULES, PROTEINS AND USES THEREOF  
 11 <130> FILE REFERENCE: FC-8-C2-PCT  
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/642,272  
 C--> 14 <141> CURRENT FILING DATE: 2003-08-18  
 16 <150> PRIOR APPLICATION NUMBER: 60/328,347  
 17 <151> PRIOR FILING DATE: 2001-10-10  
 19 <160> NUMBER OF SEQ ID NOS: 350  
 21 <170> SOFTWARE: PatentIn version 3.2  
 23 <210> SEQ ID NO: 1  
 24 <211> LENGTH: 549  
 25 <212> TYPE: DNA  
 26 <213> ORGANISM: Ctenocephalides felis  
 28 <400> SEQUENCE: 1  
 29 cagattcagg acagtgttta ttaatatact gcggtttact gaaattttat aaatatgaaa 60  
 31 gtctttttca ttttcttttg tttatgcctg attattctta atgaactgga tgcgatgcga 120  
 33 gtaattccag gaggtcgata tggaaaacac aactacaaag gaaaacagcc tgagaaaaat 180  
 35 acaatatagg aaccgcggcag ctattaacta ttatgaccac aaagatggag ccaaaatagt 240  
 37 taagtcacat cacttcgaat tagattacat gttaggaaga aaaatcacat tcttctgcat 300  
 39 ggctcaagga ttaccgcgac cttcaataac ttggtttaag gatggagttg agttatttca 360  
 41 tcatcgattt ttccaagttc atgaatggcc atgggaaatg atactttgaa atctaaaatg 420  
 43 gaaatcgatc ctacgaccca aaaagatgca ggatattacg aatgctggca gacaatcaat 480  
 45 atgcaataga tagacgagga tttcgacaga ttacgactga ttgttattaa atattcatat 540  
 47 tgatatatg 549  
 50 <210> SEQ ID NO: 2  
 51 <211> LENGTH: 549  
 52 <212> TYPE: DNA  
 53 <213> ORGANISM: Ctenocephalides felis  
 55 <400> SEQUENCE: 2  
 56 aaattttctt ttaataagaa aaatttatta ttaagtttat taattttaga atataaagct 60  
 58 ttaattatat ttttaatttt atatttttgt ttaattata taattttga gaattatttt 120  
 60 tgtaattttt atattgtatt tacagtatgt gaaggggttt taggcctttc tatttttagtt 180  
 62 gcaataattc cgtactcatg gtaatgatta ttttaaaaga tttaatataa tacaatgtta 240  
 64 aaatttttaa taataatatt ttttataatc cctattattt tattaaaaaa ttgttattga 300  
 66 ttggttcaaa caatattatt tataatatta tttatttata taattttagg aataaaaaaga 360  
 68 attataattg ttaatattag attaaatttt gggttatgata ttatatctta tagattgaat 420  
 70 ttattaagga tttgaattat tatttttaata ttaatagcat caattttaat ttataaaaat 480  
 72 aattataatt taaattattt ttattattat taatttttta ttattaatat tatttttacc 540  
 74 tttagtcat 549

Does Not Comply  
 Corrected Diskette Needed

P.3, 6-7

## RAW SEQUENCE LISTING

DATE: 08/28/2003

PATENT APPLICATION: US/10/642,272

TIME: 10:52:52

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt

Output Set: N:\CRF4\08282003\J642272.raw

77 <210> SEQ ID NO: 3  
 78 <211> LENGTH: 485  
 79 <212> TYPE: DNA  
 80 <213> ORGANISM: Ctenocephalides felis  
 83 <220> FEATURE:  
 84 <221> NAME/KEY: misc\_feature  
 85 <222> LOCATION: (129)..(129)  
 86 <223> OTHER INFORMATION: n = unknown at position 129  
 88 <220> FEATURE:  
 89 <221> NAME/KEY: misc\_feature  
 90 <222> LOCATION: (154)..(154)  
 91 <223> OTHER INFORMATION: n = unknown at position 154  
 93 <220> FEATURE:  
 94 <221> NAME/KEY: misc\_feature  
 95 <222> LOCATION: (296)..(296)  
 96 <223> OTHER INFORMATION: n = unknown at position 296  
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 101 <223> OTHER INFORMATION: n = unknown at position 316  
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 105 <222> LOCATION: (475)..(475)  
 106 <223> OTHER INFORMATION: n = unknown at position 475  
 108 <400> SEQUENCE: 3

109 ggtcgtatgc acgcacctgg aaagggatc tccaatctg ctttgctta ccgtcgtgga 60  
 111 gtccccactt ggtaaaatt gaattggagaa gatgtcaaag aacagatttt taaacttgga 120  
 W--> 113 aagatggtn taccatca caaatctgggt gttntotta gggattctca tggggtcgcc 180  
 115 caagttcgat ttgtcagtgg caacaaaatc ttgcgtatca tgaaagccat gggagtagcc 240  
 117 cctgaattac ctgaagattt atactatttg atcaagaagg ctgtagctat ccgcangcat 300  
 119 ttggaaagga accgcnagga caaagacagc aaattccgtt tgattcttga gaatccagaa 360  
 121 ttcacagact tgcccgttac tacaaaacaa agagcatctt ggaccaact ggaaatacga 420  
 123 atccagcact gatctgactt gtagctaaga tgtaaatgaa tgtgaagtta tatantaaat 480  
 125 gtgaa 485

128 <210> SEQ ID NO: 4  
 129 <211> LENGTH: 485  
 130 <212> TYPE: DNA  
 131 <213> ORGANISM: Ctenocephalides felis  
 133 <400> SEQUENCE: 4

134 ctaaaaatct agttcaaat gcgtgaatgt atctcaatcc atgttggcca agctgggtgc 60  
 136 caaattggaa acgctgttg ggagttgtac tgtttggaa atggcattca gcctgatggc 120  
 138 caaatgccat ctgacaaaac tattggaggc ggtgatgact ctttcaaac ctttttcagt 180  
 140 gagacagggg caggcaagca tgtgccacga gctgtctttg ttgatttga accaactgtt 240  
 142 gtagatgagg tccgcaactg aacataccgt caattattcc accagaaca actgattact 300  
 144 ggcaaggaag atgtgcca caattatgca cgtggtcact acacaattgg caaagaaatc 360  
 146 gttgatgttg tattggcaga attcgaaatt gctgatcaat gcaactgtctg caaggtttct 420  
 148 catttcactc cttggagggg gcaccgggtc ggatcacctc ctgtcatgga cgtctgctgt 480  
 150 gctat 485

153 <210> SEQ ID NO: 5

## RAW SEQUENCE LISTING

DATE: 08/28/2003

PATENT APPLICATION: US/10/642,272

TIME: 10:52:52

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt

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154 <211> LENGTH: 500
155 <212> TYPE: DNA
156 <213> ORGANISM: Ctenocephalides felis
158 <400> SEQUENCE: 5
159 acacatagca aattaagtct tcgcttggat ttacatgaaa attgccaaaa aaagaataca      60
161 ttcattatag gaagtattta ttcaagtatt ttttgatgac tgttctagct gttcatcaat      120
163 tcatacttaa aatagttacc ctttttaatt ttacagtat ttaaatttaa tagttggtat      180
165 agtattttat aaattttaat ttgaagcatt cttttatagg ttgggaaatt atatttttac      240
167 aaaaaaaaaa aaccgcgtcca attgatttta aacaaaacca taaaaaacta ggtgctatag      300
169 taaacagcat ttgatttgat gtatacattg cattgaaatg agtggagaag caagatgaaa      360
171 gcctatccat taatgactta agacttttta gaaatgtttt atatatacat atgtatgcta      420
173 gatatttaga tgggtgtcttg taattgaatt agatttaca ggaaccaa atgttctacatt      480
175 aaaactaaat ttatctctat
                                         500

```

178 &lt;210&gt; SEQ ID NO: 6

179 &lt;211&gt; LENGTH: 0

180 &lt;212&gt; TYPE: DNA

181 &lt;213&gt; ORGANISM: Ctenocephalides felis

183 &lt;400&gt; SEQUENCE: 6

W--&gt; 184 000

186 &lt;210&gt; SEQ ID NO: 7

187 &lt;211&gt; LENGTH: 198

188 &lt;212&gt; TYPE: DNA

189 &lt;213&gt; ORGANISM: Ctenocephalides felis

192 &lt;220&gt; FEATURE:

193 &lt;221&gt; NAME/KEY: misc\_feature

194 &lt;222&gt; LOCATION: (143)..(143)

195 &lt;223&gt; OTHER INFORMATION: n = unknown at position 143

197 &lt;220&gt; FEATURE:

198 &lt;221&gt; NAME/KEY: misc\_feature

199 &lt;222&gt; LOCATION: (167)..(167)

200 &lt;223&gt; OTHER INFORMATION: n = unknown at position 167

202 &lt;400&gt; SEQUENCE: 7

203 acatttagct ctatcggaat atctgaatat ctgaatatct gaatatctga atatccgaat 60

205 atccgaatat ccgaatatcc gaatatccgg atatccgaat atccgaatat ccgaatatcc 120

W--&gt; 207 gaatatccga atatccgaat atnogaatat ccgaatatcc gaatatnoga atatccgaat 180

209 atccgaatat ccgaatat
 198

212 &lt;210&gt; SEQ ID NO: 8

213 &lt;211&gt; LENGTH: 485

214 &lt;212&gt; TYPE: DNA

215 &lt;213&gt; ORGANISM: Ctenocephalides felis

218 &lt;220&gt; FEATURE:

219 &lt;221&gt; NAME/KEY: misc\_feature

220 &lt;222&gt; LOCATION: (475)..(475)

221 &lt;223&gt; OTHER INFORMATION: n = unknown at position 475

223 &lt;400&gt; SEQUENCE: 8

224 gttttttgtt taacttttt gaataaaaca aaatatacaa tggcggacgt agatgttcaa 60

226 atgcaattca caacaaccac gacaaaacg cgtaaagtga agaagtcgtc caagaggcgc 120

228 gaatctagcg accatggtga agttactatt acagagatgg agaacggaca ccaacagcaa 180

230 ggtggcgagt acaccaaggc catgaacaag gactggcact ctggtcactt ctgctgctgg 240

delete, see item 8  
in error summary  
sheet.

## RAW SEQUENCE LISTING

DATE: 08/28/2003

PATENT APPLICATION: US/10/642,272

TIME: 10:52:52

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt

Output Set: N:\CRF4\08282003\J642272.raw

```

232 caatgcgacg agtcaactgac cggccaacgc tacgtactcc gcgacgaaca tccttactgc 300
234 atcaagtget acgagagcgt cttttccaac acctgcgagg aatgcagcaa gatcattggc 360
236 attgattcca aggacttata ttacaaagaa aagcattggc atgaggcatg tttcttgtgc 420
W--> 238 agtaaatgcc gcgttcttcg tcgtaacagt tcggaagtaa tggacaaatt actgnggaac 480
240 tgtat 485
243 <210> SEQ ID NO: 9
244 <211> LENGTH: 549
245 <212> TYPE: DNA
246 <213> ORGANISM: Ctenocephalides felis
248 <400> SEQUENCE: 9
249 aaggatggag tcaactgtagc gaagggtatt gatctcaagg acaaatttca gaattattggg 60
251 gccaaattag tccaagatgt agctaataac accaatgaag aagctggtga tgggtactact 120
253 actgtactctg tgcttgccag agctattgca aaggaaggct ttgaaaaaat atctaaagga 180
255 gcaaatccca ttgaaatcag acgaggtgtt atgctggctg ttgatgcagt caaagaatct 240
257 ttgaaaggaa tgtcgaagcc tggtactacc cggaggaaa ttgcacaagt tgctaccatt 300
259 tctgccaatg gagacaaagc tattggaaaa ttgatctcag atgcaatgaa gcgtgttgga 360
261 aaggaagggtg taataacggt taaagatgga aaaactttac atgatgaact tgaggtcatt 420
263 gagggcatga agtttgatag aggatcattt caccttactt tatgaattcc agcaaagggtg 480
265 ctaaagtaga attccaagat ccttattttg tcagtgcaca aaaataactca gtcaagcata 540
267 ttctgcttg 549
270 <210> SEQ ID NO: 10
271 <211> LENGTH: 549
272 <212> TYPE: DNA
273 <213> ORGANISM: Ctenocephalides felis
276 <220> FEATURE:
277 <221> NAME/KEY: misc_feature
278 <222> LOCATION: (207)..(207)
279 <223> OTHER INFORMATION: n = unknown at position 207
281 <220> FEATURE:
282 <221> NAME/KEY: misc_feature
283 <222> LOCATION: (513)..(513)
284 <223> OTHER INFORMATION: n = unknown at position 513
286 <220> FEATURE:
287 <221> NAME/KEY: misc_feature
288 <222> LOCATION: (515)..(515)
289 <223> OTHER INFORMATION: n = unknown at position 515
291 <400> SEQUENCE: 10
292 acgccaggct atgcttcaag ccaccaagga tgccaacaag aagggcccca acttcaccat 60
294 caccaaaaag gacagcaact tcaacatgtc ttctgcccaa attgaaagaa acaagaccaa 120
296 ggaacaattg gaagaggaaa agaaaatttc tctgtccttc cgtatcaagc ctctggatat 180
W--> 298 cgaatctctt agcgttgaaa aactcanaca aaaggccaat gaactttggg aatgcacgt 240
300 caagttggaa actgagaaat acgatctgga ggaacgccaa aaacgccagg actacgatct 300
302 taaagaattg aaagaaaggc agaaacaaca actcagacac aaagcattga agaaaggatt 360
304 ggatccagaa gccctcacag gaaaatccca cccaaaatcc aagtcgctcc aaatatgaga 420
306 gacgtgtcgc acaagatcat atgatgataa gaaaaaatta tttgaaggcg gttcgcatat 480
308 tgtctctgaa gtaatgaaaa gtctggaaca gcntncaact attcagaaac gtagtaaaact 540
310 agcttctaa 549
313 <210> SEQ ID NO: 11
314 <211> LENGTH: 87

```

## RAW SEQUENCE LISTING

DATE: 08/28/2003

PATENT APPLICATION: US/10/642,272

TIME: 10:52:52

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt

Output Set: N:\CRF4\08282003\J642272.raw

```

315 <212> TYPE: DNA
316 <213> ORGANISM: Ctenocephalides felis
318 <400> SEQUENCE: 11
319 aatttccagc gcgctcagta ccaccacgtc gagacgatca accgatgcgc ctttcgaacc 60
321 ccagtttagcg tactgggtgg cgctgat 87
324 <210> SEQ ID NO: 12
325 <211> LENGTH: 268
326 <212> TYPE: DNA
327 <213> ORGANISM: Ctenocephalides felis
330 <220> FEATURE:
331 <221> NAME/KEY: misc_feature
332 <222> LOCATION: (30)..(31)
333 <223> OTHER INFORMATION: n = unknown at positions 30 and 31
335 <400> SEQUENCE: 12
W--> 336 acggtttaca ccctagtcgc gcctaaagan nttttattta aaaacaaatt gtattacttt 60
338 taacaagttt ctctacaaat ttgagaaaac catgttgtat ttttaactac tagtgtaata 120
340 tttttgtaa aatatattat ttttgtctgt cccaaacgaa tgattttcct gcggccctgc 180
342 ctgttgacaga tattcctaca caggttatta taagtcacgc tgtttgcgcg ccgtagcaat 240
344 tacgcgcccc gttcgcgccg ttcgttgt 268
347 <210> SEQ ID NO: 13
348 <211> LENGTH: 436
349 <212> TYPE: DNA
350 <213> ORGANISM: Ctenocephalides felis
352 <400> SEQUENCE: 13
353 attttaaatt ttttataaaa ataattttta aaattataaa aaatatgaaa taatgattaa 60
355 attagtataa tataatttat tgataatatt aaattgtag gtttatttaa ggaattcggc 120
357 aaatataata ttcacctgtt taacaaaaac atgtcttttt gaaaataata taaagtctaa 180
359 tctgccatt gaagatttaa aaggccgcag taatttgact gtgcaaagg agcataatca 240
361 atagtttttt aattgaaagc tggaatgaat gattgaatga aatattaact gtcttaataa 300
363 aattgttata gaatttaatt tttatgttaa aaagcgtaaa tattattaaa ggacgagaag 360
365 accctttaaa gttttatata taaatataga ttattttaag aatattatta aatttattta 420
367 tattaatata tttatt 436
370 <210> SEQ ID NO: 14
371 <211> LENGTH: 324
372 <212> TYPE: DNA
373 <213> ORGANISM: Ctenocephalides felis
375 <400> SEQUENCE: 14
376 accttgaata gtaataatta tctctttcag gacccccatt tcgaatcaat attataatta 60
378 aacctttctac tttcagtgct gatgtatcct ttatctatat atatgcaatt agcaattgta 120
380 taatttatat ataaatgtgt atactttcgt aggttatgg agcgcatctt cacattatcc 180
382 aattttaagt tcacaaaagt ctctaagtga agtcgtgtct tgtgtgtttc gtagagaatt 240
384 tagtcggaca attgtaaaat gtcaaataga cttgtaaaag acaaagttat gtagtggttc 300
386 taaagtagtg atattgtgtc gagt 324
389 <210> SEQ ID NO: 15
390 <211> LENGTH: 391
391 <212> TYPE: DNA
392 <213> ORGANISM: Ctenocephalides felis
395 <220> FEATURE:
396 <221> NAME/KEY: misc_feature

```

**RAW SEQUENCE LISTING ERROR SUMMARY**  
PATENT APPLICATION: US/10/642,272

DATE: 08/28/2003  
TIME: 10:52:53

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt  
Output Set: N:\CRF4\08282003\J642272.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 129,154,296,316,475  
Seq#:7; N Pos. 143,167  
Seq#:8; N Pos. 475  
Seq#:10; N Pos. 207,513,515  
Seq#:12; N Pos. 30,31  
Seq#:15; N Pos. 385  
Seq#:16; N Pos. 100,123,132,162,178,182,184,248,286,342,403  
Seq#:17; N Pos. 399,448,462,486  
Seq#:24; N Pos. 230,334,394,459  
Seq#:26; N Pos. 403  
Seq#:27; N Pos. 445  
Seq#:28; N Pos. 422,479,520  
Seq#:29; N Pos. 185,258,283  
Seq#:31; N Pos. 2,216,332,406,463,467  
Seq#:33; N Pos. 344  
Seq#:34; N Pos. 403  
Seq#:36; N Pos. 445,451  
Seq#:38; N Pos. 286  
Seq#:39; N Pos. 426  
Seq#:45; N Pos. 488  
Seq#:54; N Pos. 581  
Seq#:57; N Pos. 496  
Seq#:59; N Pos. 61,69  
Seq#:60; N Pos. 62  
Seq#:62; N Pos. 194,248,279  
Seq#:63; N Pos. 5,15,16,20,24,29,31,43,48,55,127  
Seq#:65; N Pos. 4,12,19,22,41,74,82,107,216,252,298,450  
Seq#:67; N Pos. 30,73  
Seq#:70; N Pos. 49,71  
Seq#:71; N Pos. 207,227,304  
Seq#:74; N Pos. 108,284  
Seq#:75; N Pos. 108,284  
Seq#:76; N Pos. 39,61,182  
Seq#:77; N Pos. 436,442  
Seq#:78; N Pos. 13,67  
Seq#:79; N Pos. 55  
Seq#:81; N Pos. 11,28,31,72,74,105,128,170,424,457,490  
Seq#:83; N Pos. 205  
Seq#:84; N Pos. 4,35,156,181,233  
Seq#:85; N Pos. 19  
Seq#:88; N Pos. 59,365,404,456  
Seq#:89; N Pos. 24,50,92,282  
Seq#:90; N Pos. 28,66,73  
Seq#:91; N Pos. 46,208,223,234,289

**RAW SEQUENCE LISTING ERROR SUMMARY**  
PATENT APPLICATION: US/10/642,272

DATE: 08/28/2003  
TIME: 10:52:53

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt  
Output Set: N:\CRF4\08282003\J642272.raw

Seq#:92; N Pos. 49,59,61,68  
Seq#:94; N Pos. 58,243  
Seq#:95; N Pos. 38,129,134,164,188,230,239,289,303,307,349,417,419  
Seq#:96; N Pos. 493  
Seq#:97; N Pos. 30,63  
Seq#:98; N Pos. 36,40  
Seq#:99; N Pos. 23,24



## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/642,272

DATE: 08/28/2003

TIME: 10:52:53

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt

Output Set: N:\CRF4\08282003\J642272.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application Number  
 L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 L:113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:120  
 M:341 Repeated in SeqNo=3  
 L:184 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (6) SEQUENCE:  
 L:207 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:120  
 L:238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:420  
 L:298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:180  
 M:341 Repeated in SeqNo=10  
 L:336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
 L:413 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:360  
 L:480 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:60  
 M:341 Repeated in SeqNo=16  
 L:534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:360  
 M:341 Repeated in SeqNo=17  
 L:696 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:180  
 M:341 Repeated in SeqNo=24  
 L:746 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:360  
 L:779 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:420  
 L:820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:420  
 M:341 Repeated in SeqNo=28  
 L:855 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:180  
 M:341 Repeated in SeqNo=29  
 L:912 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0  
 M:341 Repeated in SeqNo=31  
 L:976 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:300  
 L:1009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:360  
 L:1066 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:420  
 L:1075 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (37) SEQUENCE:  
 L:1097 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:240  
 L:1132 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:420  
 L:1266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:480  
 L:1471 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:540  
 L:1583 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (56) SEQUENCE:  
 L:1613 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:480  
 L:1650 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59 after pos.:60  
 L:1677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:60  
 L:1731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:180  
 M:341 Repeated in SeqNo=62  
 L:1795 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0  
 M:341 Repeated in SeqNo=63  
 L:1894 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65 after pos.:0  
 M:341 Repeated in SeqNo=65  
 L:1941 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67 after pos.:0  
 M:341 Repeated in SeqNo=67  
 L:2017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:0  
 M:341 Repeated in SeqNo=70  
 L:2052 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:180

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/642,272

DATE: 08/28/2003

TIME: 10:52:53

Input Set : C:\CRF4\Datahold\FC-8-C2-PCT.txt

Output Set: N:\CRF4\08282003\J642272.raw

M:341 Repeated in SeqNo=71

L:2112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74 after pos.:60

M:341 Repeated in SeqNo=74

L:2142 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:60

M:341 Repeated in SeqNo=75

L:2175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:0

M:341 Repeated in SeqNo=76

L:3752 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (124) SEQUENCE:

L:4040 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (134) SEQUENCE:

L:4861 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (164) SEQUENCE:

L:7893 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (257) SEQUENCE: